

Recombinant Avian Pneumovirus Vaccines and Vaccine Vectors

OVERVIEW

The U.S. poultry industry continues to thrive because of the high demand for poultry products for direct consumption. However, as the scale of production grows to meet consumer demand, so does the danger of avian viruses and diseases, which can infect and decimate entire flocks of poultry.

One of the more troubling and economically devastating viruses is the avian pneumovirus, or APV, which causes acute respiratory disease in turkeys. There are vaccines currently available for APV. However, they were developed using avirulent but pathogenic strains of the virus. These vaccines can actually cause reemergence of the APV disease and lead to mortality.

To counter this problem, a researcher in the University of Maryland's College of Veterinary Medicine has discovered a new method of developing vaccines and vaccine vectors for APV based on genetic engineering techniques. The vaccines can be developed using a process called reverse genetics—the APV genome will be altered with predetermined mutations to make the virus avirulent. This process will result in attenuated vaccine strains that are safer and more effective because they are apathogenic and not capable of reverting back to dangerous virulent states.

In addition to vaccines and vaccine vectors, the technology can be developed into a diagnostic tool. Early diagnosis of infected poultry would greatly reduce the number of losses within a flock.

For additional information, please contact the Office of Technology Commercialization, University of Maryland. Phone: 301-405-3947. E-mail: <u>otc@umd.edu</u>.

CONTACT INFO

UM Ventures 0134 Lee Building 7809 Regents Drive College Park, MD 20742 Email: <u>umdtechtransfer@umd.edu</u> Phone: (301) 405-3947 | Fax: (301) 314-9502

Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

Vaccines

EXTERNAL RESOURCES

• US Patent 7,510,863

LS-2002-069